

☛ Associated General Contractors of America, Inc., 1957 E St. NW., Washington, DC 20006.

☛ International Union of Operating Engineers, 1125 17th St. NW., Washington, DC 20036.

## Drywall Installers and Finishers

(O\*NET 87108, 87111, and 87114)

### Significant Points

- Employment is projected to grow slowly, but thousands of job openings will arise annually because turnover is high.
- Inclement weather seldom interrupts work, but workers may be idled when downturns in the economy slow new construction activity.
- Most drywall installers and finishers learn the trade on the job, either by working as helpers or through a formal apprenticeship.

### Nature of the Work

Drywall consists of a thin layer of gypsum between two layers of heavy paper. It is used today for walls and ceilings in most buildings because it is both faster and cheaper to install than plaster.

There are two kinds of drywall workers: installers and finishers. *Installers*, also called *applicators*, fasten drywall panels to the inside framework of residential houses and other buildings. *Finishers*, or *tapers*, prepare these panels for painting by taping and finishing joints and imperfections.

Because drywall panels are manufactured in standard sizes—usually 4 feet by 8 or 12 feet—installers must measure, cut, and fit some pieces around doors and windows. They also saw or cut holes in panels for electrical outlets, air-conditioning units, and plumbing. After making these alterations, installers may glue, nail, or screw the wallboard panels to the wood or metal framework. Because drywall is heavy and cumbersome, a helper generally assists the installer in positioning and securing the panel. A lift is often used when placing ceiling panels.

After the drywall is installed, finishers fill joints between panels with a joint compound. Using the wide, flat tip of a special trowel, they spread the joint compound into and along each side of the joint with brushlike strokes. They immediately use the trowel to press a paper tape—used to reinforce the drywall and to hide imperfections—into the wet compound and to smooth away excess material. Nail and



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screw depressions also are covered with this compound, as are imperfections caused by the installation of air-conditioning vents and other fixtures. On large commercial projects, finishers may use automatic taping tools that apply the joint compound and tape in one step. Finishers apply second and third coats, sanding the treated areas after each coat to make them as smooth as the rest of the wall surface. This results in a very smooth and almost perfect surface. Some finishers apply textured surfaces to walls and ceilings with trowels, brushes, or spray guns.

### Working Conditions

As in many other construction trades, drywall work sometimes is strenuous. Installers and finishers spend most of the day on their feet, either standing, bending, or kneeling. Some finishers use stilts to tape and finish ceiling and angle joints. Installers have to lift and maneuver heavy panels. Hazards include falls from ladders and scaffolds, and injuries from power tools. Because sanding joint compound to a smooth finish creates a great deal of dust, some finishers wear masks for protection.

### Employment

Drywall installers and finishers held about 163,000 jobs in 1998. Most worked for contractors specializing in drywall installation; others worked for contractors doing many kinds of construction. Nearly 42,000 were self-employed independent contractors.

Most installers and finishers are employed in populated areas. In other areas, where there may not be enough work to keep a drywall installer employed full time, carpenters and painters usually do the dry-wall work.

### Training, Other Qualifications, and Advancement

Most drywall workers start as helpers and learn their skills on the job. Installer helpers start by carrying materials, lifting and holding panels, and cleaning up debris. Within a few weeks, they learn to measure, cut, and install materials. Eventually, they become fully experienced workers. Finisher apprentices begin by taping joints and touching up nail holes, scrapes, and other imperfections. They soon learn to install corner guards and to conceal openings around pipes. At the end of their training, drywall installers and finishers learn to estimate the cost of installing and finishing drywall.

Some drywall installers and finishers learn their trade in an apprenticeship program. The United Brotherhood of Carpenters and Joiners of America, in cooperation with local contractors, administers an apprenticeship program in carpentry that includes instruction in drywall installation. In addition, local affiliates of the Associated Builders and Contractors and the National Association of Home Builders conduct training programs for nonunion workers. The International Brotherhood of Painters and Allied Trades conducts a 2-year apprenticeship program for drywall finishers.

Employers prefer high school graduates who are in good physical condition, but they frequently hire applicants with less education. High school or vocational school courses in carpentry provide a helpful background for drywall work. Regardless of educational background, installers must be good at simple arithmetic.

Drywall workers with a few years' experience and leadership ability may become supervisors. Some workers start their own contracting businesses.

### Job Outlook

Replacement needs will account for almost all job openings for drywall installers and finishers through the year 2008. Thousands of jobs will open up each year because of the need to replace workers who transfer to jobs in other occupations or leave the labor force. Turnover in this occupation is very high, reflecting the lack of formal training requirements and the fluctuations of the business cycle, to which the construction industry is very sensitive. Because of their relatively weak

attachment to the occupation, many workers with limited skills leave the occupation when they find they dislike the work or because they can't find steady employment.

Additional job openings will be created by the rising demand for drywall work. Employment is expected to grow more slowly than the average for all occupations, reflecting the slow growth of new construction and renovation. In addition to traditional interior work, the growing acceptance of insulated exterior wall systems will provide additional jobs for drywall workers.

Despite the growing use of exterior panels, most drywall installation and finishing is done indoors. Therefore, these workers lose less work time because of inclement weather than some other construction workers. Nevertheless, they may be unemployed between construction projects and during downturns in construction activity.

### Earnings

In 1998, the median hourly earnings of drywall installers and finishers were \$14.38. The middle 50 percent earned between \$11.34 and \$19.22. The lowest 10 percent earned less than \$9.04 and the highest 10 percent earned more than \$24.47.

Trainees usually started at about half the rate paid to experienced workers and received wage increases as they became more highly skilled.

Some contractors pay these workers according to the number of panels they install or finish per day; others pay an hourly rate. A 40-hour week is standard, but sometimes the workweek may be longer. Those who are paid hourly rates receive premium pay for overtime.

### Related Occupations

Drywall installers and finishers combine strength and dexterity with precision and accuracy to make materials fit according to a plan. Other occupations that require similar abilities include carpenters, floor covering installers, form builders, insulation workers, and plasterers and stucco masons.

### Sources of Additional Information

For information about work opportunities in drywall application and finishing, contact local drywall installation contractors; a local of the unions previously mentioned; a local joint union-management apprenticeship committee; a State or local chapter of the Associated Builders and Contractors; or the nearest office of the State employment service or State apprenticeship agency.

For details about job qualifications and training programs in drywall application and finishing, write to:

- ☛ Associated Builders and Contractors, Inc., 1300 North 17th St., Rosslyn, VA 22209.
- ☛ Home Builders Institute, National Association of Home Builders, 1201 15th St. NW., Washington, DC 20005.
- ☛ International Brotherhood of Painters and Allied Trades, 1750 New York Ave. NW., Washington, DC 20006.
- ☛ United Brotherhood of Carpenters and Joiners of America, 101 Constitution Ave. NW., Washington, DC 20001.

## Electricians

(O\*NET 87202A and 87202C)

### Significant Points

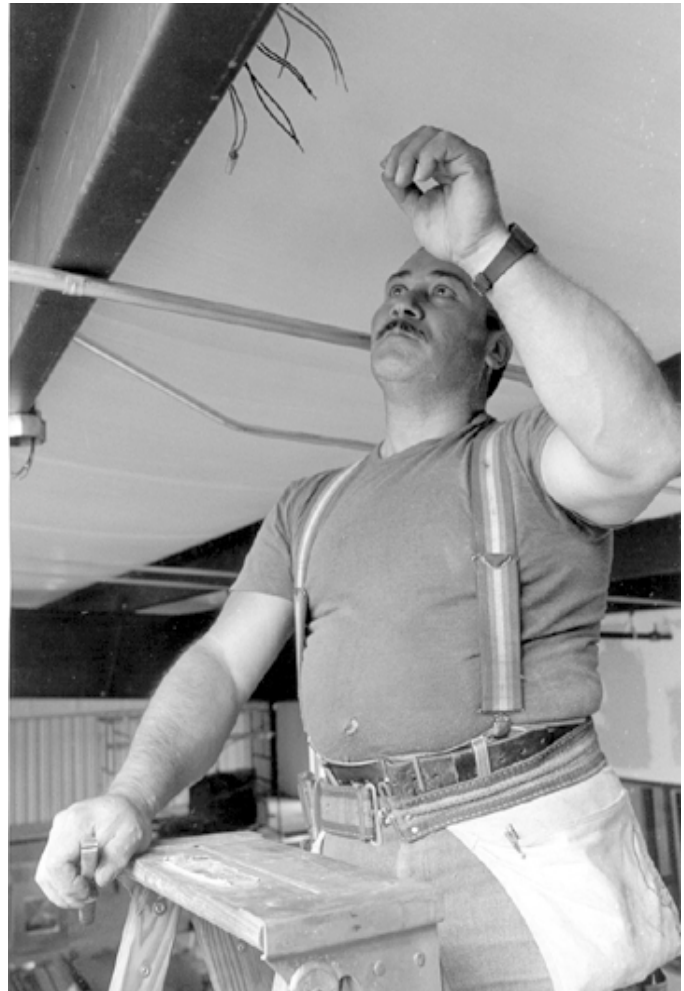
- Job opportunities are expected to be very good for qualified electricians.
- Most electricians acquire their skills by completing a formal 4-or 5-year apprenticeship program.
- In contrast to other construction trades, about one-third of all electricians work in industries other than construction.

### Nature of the Work

Electricity is essential for light, power, air-conditioning, and refrigeration. Electricians install, connect, test, and maintain electrical systems for a variety of purposes, including climate control, security, and communications. They also may install and maintain the electronic controls for machines in business and industry. Although most electricians specialize in either construction or maintenance, a growing number do both.

Electricians work with blueprints when they install electrical systems in factories, office buildings, homes, and other structures. Blueprints indicate the location of circuits, outlets, load centers, panel boards, and other equipment. Electricians must follow the National Electric Code and comply with State and local building codes when they install these systems. In factories and offices, they first place conduit (pipe or tubing) inside designated partitions, walls, or other concealed areas. They also fasten to the wall small metal or plastic boxes that will house electrical switches and outlets. They then pull insulated wires or cables through the conduit to complete circuits between these boxes. In lighter construction, such as residential, plastic-covered wire usually is used rather than conduit.

Regardless of the type of wire used, electricians connect it to circuit breakers, transformers, or other components. They join the wires by twisting ends together with pliers, and covering the ends with special plastic connectors. When stronger connections are required, electricians may use an electric "soldering gun" to melt metal onto the twisted wires, which they then cover with durable electrical tape. After they finish the wiring, they use testing equipment, such as ohmmeters, voltmeters, and oscilloscopes, to check the circuits



*Electricians need color vision because wires are usually identified by color.*